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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/558,022	04/25/2000	Takatoshi Ono	NAKJ-BK74	9324

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01/16/2004

EXAMINER

SHERKAT, AREZOO

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/558,022

Applicant(s)

ONO ET AL.

Examiner

Arezoo Sherkat

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 April 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .                      6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

Claims 1-10 are examined.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5 and 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. "type 3 encryption key".

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashe, (U.S. Patent No. 6,014,745 and Ashe hereinafter) in view of Marino et al., (U.S. Patent No. 6,026,165 and Marino hereinafter).

Regarding claims 1, 9, and 10, Ashe discloses a secure system that

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(1) reads a type 1 key (i.e., Master Key) from a storage unit (i.e., memory) and

(a) main data (i.e., programs and/or data)(Col. 1, lines 35-65),

(b) an encrypted type 2 key (i.e., unique key) produced by encrypting a type 2 key using the type 1 key (i.e., the unique key is encrypted using a master encryption algorithm and can only be obtained using the master key with the master algorithm)(Col. 2, lines 49-67 and Col. 3, lines 1-15), and

(c) encrypted condition information produced by encrypting condition information using the type 2 key (i.e., unique key) from a recording medium (Col. 1, lines 35-65 and Col. 3, lines 10-15),

(2) decrypts the encrypted condition information using the type 2 key(Col. 3, lines 10-15), and

(3) controls usage of the read main data based on the condition information (i.e., proprietary algorithm)(Col. 1, lines 55-65),

Ashe does not expressly disclose updating means and method for updating the condition information and the type 1 key and a generating means and method for generating a new type 2 key in accordance with usage of the read main data and replacing them on the recording medium with the new ones, although he mentions that as an alternative the algorithm unique to the program being encrypted may be encrypted as well (Col. 3, lines 10-15).

However, Marino discloses updating means and method for updating the condition information and the type 1 key and a generating means and method for generating a new type 2 key in accordance with usage of the read main data (Col. 7, lines 3-57);

encrypting means and method for encrypting the updated condition information using the new type 2 key and replacing the encrypted condition information on the recording medium with the encrypted updated condition information (Col. 7, lines 50-67 and Col. 8, lines 1-24);

encrypting means and method for encrypting the new type 2 key using the updated type 1 key and replacing the encrypted type 2 key on the recording medium with the encrypted new type 2 key (Col. 7, lines 50-67 and Col. 8, lines 1-24).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teachings of Ashe with the teachings of Marino to include a means and method of updating and replacing the encryption key and the condition information for each main data with the motivation to enable the encryption key to be easily changed by a user, thus enhancing the security of the system (Marino, Col. 2, lines 43-46).

Regarding claims 2 and 3, Ashe discloses a secure system that

(1) reads a type 1 key (i.e., Master Key) from a storage unit (i.e., memory)  
and

(a) main data (i.e., programs and/or data)(Col. 1, lines 35-65)

(b) an encrypted type 2 key (i.e., unique key) produced by encrypting a type 2 key using the type 1 key (i.e., the unique key is encrypted using a master encryption algorithm and can only be obtained using the master key with the master algorithm)(Col. 2, lines 49-67 and Col. 3, lines 1-15), and

(c) encrypted condition information produced by encrypting condition information using the type 2 key (i.e., unique key) from a recording medium on which n (where n is an integer no less than two) sets of main data(i.e., proprietary information such as programs and/or data), an encrypted type 2 key, and encrypted condition information are recorded (Col. 1, lines 35-65 and Col. 3, lines 10-15),

(2) decrypts the encrypted condition information using the type 2 key (i.e., unique key)(Col. 3, lines 10-15), and

(3) controls usage of the read main data based on the condition information (i.e., proprietary algorithm)(Col. 1, lines 55-65),

Ashe does not expressly disclose a first and second updating means for updating the condition information and the type 1 key and a generating means for generating a new type 2 key in accordance with usage of the read main data and replacing them on the recording medium with the new ones, although he mentions that as an alternative the algorithm unique to the program being encrypted may be encrypted as well (Ashe, Col. 3, lines 10-15).

However, Marino discloses a first and second updating means for updating the condition information and the type 1 key and a generating means for generating a new type 2 key in accordance with usage of the read main data (Col. 7, lines 3-57);

first encrypting means for encrypting the updated condition information using the new type 2 key and replacing the encrypted condition information on the recording medium with the encrypted updated condition information (Col. 7, lines 50-67 and Col. 8, lines 1-24);

second encrypting means for encrypting the new type 2 key using the updated type 1 key and replacing the encrypted type 2 key on the recording medium with the encrypted new type 2 key (Col. 7, lines 50-67 and Col. 8, lines 1-24).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teachings of Ashe with the teachings of Marino to include a means and method of updating and replacing the encryption key and the condition information for each main data with the motivation to enable the encryption key to be easily changed by a user, thus enhancing the security of the system (Marino, Col. 2, lines 43-46).

Regarding claim 4, Ashe discloses when the generating means has not generated a new type 2 key, the first encrypting means re-encrypts the updated condition information using a same type 2 key as was used to decrypt the encrypted condition information (Col. 2, lines 49-67 and Col. 3, lines 1-15).

Ashe does not expressly disclose wherein the generating means generates a new type 2 key every time a user makes a predetermined number of uses of the main data on the recording medium.

However Marino discloses wherein the generating means (i.e., the sequence number generator) generates a new type 2 key every time a user makes a predetermined number of uses of the main data on the recording medium (Col. 7, lines 14-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teachings of Ashe with the teachings of Marino to include a means and method of updating and replacing the type 2 key in a predetermined fashion with the motivation to enable the encryption key to be easily changed by a user, thus enhancing the security of the system (Marino, Col. 2, lines 43-46).

Regarding claim 7, Ashe does not expressly disclose wherein the updating means updates the type 1 key by performing a predetermined calculation on the read type 1 key.

However, Marino discloses wherein the updating means updates the type 1 key (i.e., the sequence number which is used to create a "superkey") by performing a predetermined calculation on the read type 1 key (Col. 7, lines 14-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teachings of Ashe with the teachings of



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Marino to include a means and method of updating and replacing the type 1 key with the motivation to enable the encryption key to be easily changed by a user, thus enhancing the security of the system (Marino, Col. 2, lines 43-46).

Regarding claim 8, Ashe does not expressly disclose wherein the updating means updates the type 1 key by adding one to the read type one key.

However, Marino discloses wherein the updating means updates the type 1 key (i.e., the sequence number which is used to create a "superkey") by adding one to the read type one key (Col. 7, lines 40-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teachings of Ashe with the teachings of Marino to include a means and method of updating and replacing the type 1 key by adding one to the read type 1 key with the motivation to enable the encryption key to be easily changed by a user, thus enhancing the security of the system (Marino, Col. 2, lines 43-46).

2. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashe, (U.S. Patent No. 6,014,745 and Ashe hereinafter) and Marino et al., (U.S. Patent No. 6,026,165 and Marino hereinafter) in view of Inazawa et al., (U.S. Patent No. 6,587,948 and Inazawa hereinafter).

The teachings of Ashe and Marino are discussed above.

Regarding claim 5, Ashe and Marino does not expressly disclose a type 3 encryption key to encrypt the main data.

However, Inazawa discloses wherein the main data in each set on the recording medium has been encrypted using a type 3 encryption key (i.e., a disc key DK)(Col. 5, lines 64-67 and Col. 6, lines 1-11), and obtaining means for obtaining the type 3 encryption key (i.e., the disc key)(Col. 6, lines 57-63); and

second decrypting means for decrypting the read main data using the obtained type 3 encryption key (Col. 6, lines 57-63).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teachings of Ashe and Marino with the teachings of Inazawa to include a type 3 encryption key for encrypting main data with the motivation to be capable of effectively preventing illegal copies (Inazawa, Col. 2, lines 56-57).

Regarding claim 6, Ashe and Marino does not expressly disclose a type 3 encryption key to encrypt the main data.

However, Inazawa discloses wherein the main data in each set on the recording medium has been encrypted using a type 3 encryption key (i.e., a disc key DK) that is unique to the data usage controlling apparatus (Col. 1, lines 65-67 and Col. 2, lines 1-30), and storing means for storing the type 3 encryption key (i.e., the disc key)(Col. 5, lines 64-67 and Col. 6, lines 1-11); and

second decrypting means for decrypting the read main data using the obtained type 3 encryption key (Col. 6, lines 57-63).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teachings of Ashe and Marino with the teachings of Inazawa to include a type 3 encryption key for encrypting main data with the motivation to be capable of effectively preventing illegal copies (Inazawa, Col. 2, lines 56-57).

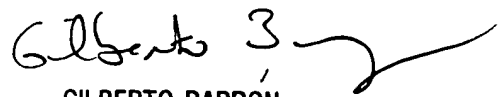
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arezoo Sherkat whose telephone number is (703) 305-8749. The examiner can normally be reached on 8:00-4:30 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Arezoo Sherkat  
Patent Examiner  
Technology Center 2100  
December 9, 2003

  
GILBERTO BARRON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

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